

## REMARKS

Applicant hereby submits this preliminary amendment, and requests that the amendments presented herein be entered before the Examiner's initial review of this application. Specifically, Applicant has amended paragraph [0001] of page 1 of the specification to include the Application Serial Number for the concurrently filed U.S. Patent Application entitled "SYSTEM AND METHOD FOR RENDERING DIGITAL IMAGES HAVING SURFACE REFLECTANCE PROPERTIES." Independent claim 1 has been amended herein by inserting a semicolon on line 4 after the word "vertices." Such amendment is not being made to avoid the prior art, to narrow the scope of claim 1, or to alter the patentability of such claim in any way, but rather such amendment is made solely to correct a grammatical informality. No new matter has been added by the amendments presented herein.

Applicant respectfully requests that the Examiner call the below listed attorney if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.


Respectfully submitted,

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit: September 13, 2001

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**PATENT APPLICATION**  
ATTORNEY DOCKET NO. 10015870-1

**IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE**

**Inventor(s):**      **Bradford A. Ritter**

**Serial No.:**      **09/921,680**                      **Examiner:**      **Not Yet Assigned**

**Filing Date:**      **August 3, 2001**                      **Group Art Unit:**      **Not Yet Assigned**

**Title:**              **METHOD FOR EFFICIENTLY CALCULATING TEXTURE COORDINATE  
GRADIENT VECTORS**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the specification:**

Paragraph beginning at page 1, paragraph [0001] has been amended as follows:

[0001] This is a continuation-in-part of co-pending and commonly assigned Patent Application Serial Number 09/573,059 filed May 17, 2000, entitled "METHOD AND APPARATUS FOR PERFORMING H-SPACE BUMP MAPPING SUITABLE FOR IMPLEMENTATION WITH H-SPACE LIGHTING IN A GRAPHICS PIPELINE OF A COMPUTER GRAPHICS DISPLAY SYSTEM," the disclosure of which is hereby incorporated herein by reference. The present invention is also related to co-pending and commonly assigned U.S. Patent Application Serial No. 09/528,700 filed March 17, 2000, entitled "APPARATUS FOR AND METHOD OF RENDERING 3D OBJECTS WITH PARAMETRIC TEXTURE MAPS," and concurrently filed and commonly assigned U.S. Patent Application Serial No. [ ] 09/921,681, entitled "SYSTEM AND METHOD FOR RENDERING DIGITAL IMAGES HAVING SURFACE REFLECTANCE PROPERTIES," the disclosures of which are hereby incorporated herein by reference.

**In the claims:**

1. A method for rendering a three-dimensional (3D) graphical image, said method comprising the steps of:
  - representing said 3D graphical image as a plurality of graphics primitives each having a plurality of vertices;
  - for each of said plurality of graphics primitives, computing at least two texture coordinate gradient vectors;
  - for each vertex of said plurality of graphics primitives, determining a 3D coordinate frame, wherein said determining step includes using said at least two texture coordinate gradient vectors computed for the respective graphics primitive for orienting said 3D coordinate frame; and
  - utilizing at least said 3D coordinate frame to determine parameters of a parametric texture mapping function.